

CLAIMS:

What is Claimed is:

1. A fryer, comprising:
  - a cooking vessel adapted to contain a cooking medium, wherein the cooking vessel comprises at least one wall;
  - means for heating the cooking medium;
  - a first temperature sensor adapted to determine a first temperature, and to generate a first signal indicating the first temperature, wherein the first temperature is a temperature of the cooking medium or a temperature of air within the cooking vessel;
  - a second temperature sensor adapted to determine a second temperature of the at least one wall, and to generate a second signal indicating the second temperature; and
  - a controller electrically coupled to the first temperature sensor and to the second temperature sensor, wherein the controller is adapted to receive the first signal, receive the second signal, and deactivate the means for heating when at least one predetermined condition is satisfied, wherein the at least one predetermined condition is at least one condition selected from the group consisting of:
    - the second temperature is greater than or equal to a particular predetermined temperature; and
    - a difference between the second temperature and the first temperature is greater than or equal to a predetermined temperature difference.
2. The fryer of claim 1, wherein the controller also is adapted to deactivate the means for heating when the first temperature is less than or equal to a further predetermined temperature.
3. The fryer of claim 1, wherein the particular predetermined temperature is greater than the further predetermined temperature.
4. The fryer of claim 3, wherein the particular predetermined temperature is about 232° C.
5. The fryer of claim 1, wherein the predetermined temperature difference is about 60° C.
6. The fryer of claim 1, wherein the means for heating comprises a heater, and the heater comprises a gas burner.
7. The fryer of claim 1, wherein the means for heating comprises a heater, and the heater comprises an electric heating element.

8. The fryer of claim 7, wherein the electric heating element comprises at least one heating coil.
9. The fryer of claim 1, wherein the cooking medium comprises at least one medium selected from the group consisting of an oil, a liquid shortening, and a meltable-solid shortening.
10. The fryer of claim 1, wherein the first temperature sensor is affixed to the at least one wall, and the second temperature sensor is affixed to the at least one wall.
11. The fryer of claim 10, wherein the first temperature sensor is positioned above the second temperature sensor.
12. The fryer of claim 1, wherein the first temperature sensor is affixed to the at least one wall, and the second temperature sensor is affixed to the means for heating the cooking medium.
13. The fryer of claim 12, wherein the first temperature sensor is positioned above the second temperature sensor.
14. The fryer of claim 1, further comprising means for indicating whether the means for heating has been deactivated.
15. The fryer of claim 14, wherein the means for indicating comprises a visually perceivable device.
16. The fryer of claim 15, wherein the visually perceivable device comprises a light emitting device.
17. The fryer of claim 14, wherein the means for indicating comprises an audibly perceivable device.
18. The fryer of claim 14, wherein the means for indicating is activated when the at least one predetermined condition is satisfied a predetermined number of times within a predetermined amount of time.
19. The fryer of claim 18, wherein the predetermined number of times is about three times, and the predetermined amount of time is about ten minutes.
20. The fryer of claim 14, wherein the means for indicating is activated when an amount of time between an activation of the means for heating and a subsequent reactivation of the means for heating after a deactivation of the means for heating is greater than a predetermined amount of time.
21. The fryer of claim 20, wherein the predetermined amount of time is between about 40 seconds and about 70 seconds.

22. The fryer of claim 14, wherein the means for indicating is activated when during a predetermined number of activation and reactivation cycles, a predetermined amount of time is exceeded a predetermined number of times.

23. A method of deactivating a fryer when a level of a cooking medium in the fryer falls below a predetermined level, wherein the fryer comprises a cooking vessel adapted to contain the cooking medium, and means for heating the cooking medium, wherein the cooking vessel comprises at least one wall, the method comprising the steps of:

determining a first temperature, wherein the first temperature is a temperature of the cooking medium or a temperature of air within the cooking vessel;

determining a second temperature of the at least one wall; and

deactivating the means for heating when at least one predetermined condition is satisfied, wherein the at least one predetermined condition is selected from the group consisting of:

the second temperature is greater than or equal to a particular predetermined temperature; and

a difference between the second temperature and the first temperature is greater than or equal to a predetermined temperature difference.

24. The method of claim 23, wherein the means for heating comprises a heater.

25. The method of claim 23, wherein the particular predetermined temperature is greater than the further predetermined temperature.

26. The method of claim 25, wherein the particular predetermined temperature is about 232° C.

27. The method of claim 23, wherein the predetermined temperature difference is about 60° C.

28. The method of claim 24, wherein the heater comprises a gas burner.

29. The method of claim 23, wherein the heater comprises an electric heating element.

30. The method of claim 29, wherein the electric heating element comprises at least one heating coil.

31. The method of claim 23, wherein the cooking medium comprises at least one medium selected from the group consisting of an oil, a liquid shortening, and a meltable-solid shortening.

32. The method of claim 23, wherein the first temperature sensor is affixed to the at least one wall, and the second temperature sensor is affixed to the at least one wall.

33. The method of claim 32, wherein the first temperature sensor is positioned above the second temperature sensor.
34. The method of claim 23, wherein the first temperature sensor is affixed to the at least one wall, and the second temperature sensor is affixed to the means for heating the cooking medium.
35. The method of claim 34, wherein the first temperature sensor is positioned above the second temperature sensor.
36. The method of claim 23, further comprising the step of indicating whether the means for heating has been deactivated.
37. The method of claim 36, wherein the step of indicating comprises the step of visually indicating whether the means for heating has been deactivated using a visually perceivable device.
38. The method of claim 37, wherein the visually perceivable device comprises a light emitting device.
39. The method of claim 36, wherein the step of indicating comprises the step of audibly indicating whether the means for heating has been deactivated using an audibly perceivable device.
40. The method of claim 23, wherein the means for heating the cooking medium is positioned within the cooking vessel.
41. A fryer, comprising:  
a cooking vessel adapted to contain a cooking medium, wherein the cooking vessel comprises at least one wall;  
means for heating the cooking medium;  
a particular temperature sensor adapted to determine a particular temperature of the at least one wall; and  
a controller electrically coupled to the particular temperature sensor, wherein the controller is adapted to deactivate the means for heating the cooking medium when the particular temperature is greater than or equal to a predetermined temperature.
42. The fryer of claim 41, wherein the predetermined temperature is about 232° C.
43. The fryer of claim 41, further comprising a further temperature sensor adapted to determine a further temperature, wherein the further temperature is a temperature of the cooking medium or a temperature of air within the cooking vessel, wherein the controller also is adapted

to deactivate the means for heating when a difference between the particular temperature and the further temperature is greater than or equal to a predetermined temperature difference.

44. The fryer of claim 43, wherein the controller further is adapted to deactivate the means for heating when the further temperature is less than or equal to a further predetermined temperature.

45. The fryer of claim 43, wherein the predetermined temperature difference is about 60° C.

46. The fryer of claim 41, further comprising means for indicating whether the means for heating has been deactivated.

47. The fryer of claim 46, wherein the means for indicating is activated when the at least one predetermined condition is satisfied a predetermined number of times within a predetermined amount of time.

48. The fryer of claim 47, wherein the predetermined number of times is about three times, and the predetermined amount of time is about ten minutes.

49. The fryer of claim 46, wherein the means for indicating is activated when an amount of time between an activation of the means for heating and a subsequent reactivation of the means for heating after a deactivation of the means for heating is greater than a predetermined amount of time.

50. The fryer of claim 49, wherein the predetermined amount of time is between about 40 seconds and about 70 seconds.

51. The fryer of claim 46, wherein the means for indicating is activated when during a predetermined number of activation and reactivation cycles, a predetermined amount of time is exceeded a predetermined number of times.

52. The fryer of claim 51, wherein the predetermined number of activation and reactivation cycles is seven, the predetermined amount of time is between about 40 seconds and about 70 seconds, and the predetermined number of times is four.

52. <sup>53</sup> The fryer of claim 51, wherein the predetermined number of times divided by the predetermined number of activation and reactivation cycles is greater than or equal to about .5.